16. (Amended) Recombinant nucleic acid comprising a contiguous nucleic acid sequence encoding amino acid residue 20 to 494 of SEQ. ID. NO. 2 and a promoter effective to initiate transcription of said contiguous nucleic acid sequence in a host cell.

17. (Amended) Recombinant nucleic acid comprising no less than 60 contiguous nucleotides selected from nucleotide 157 to 1641 of SEQ. ID. NO. 1 or its complementary strand, wherein T can also be U, and a promoter effective to initiate transcription of said contiguous nucleotides in a host cell.

REMARKS

Claims 12, 13 and 18 have been canceled without prejudice to future prosecution thereof. Claims 14-17 and 19-29 are pending in this application (*see* Appendix A).

I. The Section 102(f) Rejection

The Examiner rejected claims 14-21 under 35 U.S.C. § 102(f) as being anticipated by Clonetech's cDNA library.

Applicant submits that the amendments above render this rejection moot. The pending claims 14-17 and 19-21 cover expression constructs in which the contiguous nucleotides encoding human PPARγ polypeptides are placed under the control of a promoter which is capable of transcribe the cloned sequences. No new matter is introduced by the amendment as such expression constructs are described in the specification, including, but not limited to, page 10 of the application.

II. The Section 103 Rejection

The Examiner rejected claims 22-29 under 35 U.S.C. § 103 as being obvious over Chen et al. in view of Sher et al. This rejection is respectfully traversed.

The following tenets of patent law must be adhered to when applying Section 103:

(1) The claimed invention must be considered as a whole;

(2) The references must be considered as a whole and suggest the desirability and thus the obviousness of making the combination;

(3) The references must be viewed without the benefit of hindsight vision afforded by the claimed invention;

(4) "Ought to be tried" is not the standard with which obviousness is determined.

Hodosh v. Block Drug, 229 U.S.P.Q. 182, 187, n.5 (Fed. Cir. 1986).

A. The differences between the prior art and the claimed invention

Patentability analysis properly begins with the claims, for they measure and define the invention. Claims 22-29 cover isolated, purified or enriched nucleic acids encoding the human PPARγ polypeptides. These claims are not about a method of predicting or obtaining a cDNA clone of human PPARγ. Thus, the invention cannot be tested on the basis of whether the "idea" of cloning human PPARγ gene is patentable. Under the patent statute, "ideas" are not patentable; claimed structures are. Reducing a claimed invention to an "idea," and then determining

patentability of the "idea" is error. *See* Jones v. Hardy, 220 USPQ 1021, 1024 (Fed. Cir. 1984).

Structurally, Chen et al. describes the nucleotide sequence and amino acid sequence of mPPARγ. Sher et al. describes cloning human PPARα from a human liver cDNA library using two mouse PPARα primers. Neither Chen et al. nor Sher et al. describes the existence of a human PPARγ gene, let alone the nucleotide sequence of SEQ ID NO:1 or the amino acid sequence of SEQ ID NO:2.

Sequence comparison shows that the nucleic acids covered by claims 22-29 are structurally different from the nucleic acids described by Chen et al. and Sher et al. It is a well established patent law principle that the prior art references (or references when combined) must teach or suggest all the claim limitations. *See* In re Fine, 5 U.S.P.Q.2d 1596 (Fed. Cir. 1988); and In re Jones, 21 U.S.P.Q.2d 1941 (Fed. Cir. 1992). Because the claims of this application are limited by specific nucleic acid sequences not described in Chen et al. or Sher et al., Applicant submits that the prior art references,

either alone or in combination, do not teach or suggest all the claim limitations.

B. The knowledge of one of ordinary skill in the art at the time when the claimed invention was made

To reach appropriate determination under 35 U.S.C. § 103, the examiner must step backward in time and into the shoes worn by the hypothetical "person of ordinary skill in the art" when the invention was unknown and just before it was made. In view of all factual information, the examiner must then make a determination whether the claimed invention "as a whole" would have been obvious at that time to that person. Knowledge of applicant's disclosure must be put aside in reaching this determination. *See* MPEP § 2142, p. 2100-89.

Obviousness cannot be predicated on what is **not known** at the time an invention is made, even if the inherency of a certain feature is later established. In re Rijckaert, 28 U.S.P.Q.2d 1955, 1957 (Fed. Cir. 1993).

Although we now know that human PPARγ is inherent in the human genome and some human cDNA libraries, at the time when the claimed invention was made, it was not known that the human PPARγ described in this application existed. In fact, it was not known whether any human PPARγ existed, or if it existed, how many varieties there were. A later application by Applicant (i.e. provisional application no. 60/005,809) shows that there are at least two human PPARγ genes.

At least in this aspect, the fact of this case is distinguished from that of In re Dillon, 16 U.S.P.Q.2d 1897 (Fed. Cir. 1990). In In re Dillon, a claim to a hydrocarbon fuel composition containing tetra-orthoesters was rejected on the ground of obviousness in view of certain primary and secondary references. The primary references describe hydrocarbon fuel compositions containing tri-orthoesters. The secondary references describe using tri-orthoesters and tetra-orthoesters as water scavengers in hydraulic fluids and show equivalence between tetra-orthoesters and tri-orthoesters for that purpose. Federal Circuit affirmed, stating that *prima facie* obviousness was established because there is a sufficiently close

relationship between tri-orthoesters and tetra-orthoesters in the fuel oil art to create an expectation that hydrocarbon fuel compositions containing tetra-orthoesters would have similar properties to like compositions containing tri-orthoesters, and to provide the motivation to make such new compositions. Both tri-orthoesters and tetra-orthoesters were known at the time when the claimed invention in In re Dillon was made and the prior art described utilities for compositions containing tri-orthoesters or tetra-orthoesters. Unlike In re Dillon, Chen et al. or Sher et al. did not describe the existence of any human PPARγ, let alone the particular version of human PPARγ claimed in this application.

C. There is no motivation in the prior art to combine Chen et al. and Sher et al.

On page 5 of the office action, the Examiner stated:

> the instant rejection is based upon the fact an artisan would have been motivated to take this inventive step, i.e. to isolate that cDNA complete with all of its innate properties, based upon the art of record.

However, the mere fact that references can be combined or modified does not render the resultant combination obvious unless the prior art also suggests the desirability of the combination. In re Mills, 16 U.S.P.Q.2d 1430, 1432 (Fed. Cir. 1990). The teaching or suggestion to make the claimed combination and the reasonable expectation of success must both be found in the prior art, not in applicant's disclosure. In re Vacek, 20 U.S.P.Q.2d 1438 (Fed. Cir. 1991).

In this case, neither Chen et al. nor Sher et al. describes the desirability of screening a human cDNA library with the murine PPARγ cDNA for a human PPARγ gene. In fact, neither references describes **any utility** for a PPARγ gene.

If the prior art does not teach any specific or significant utility for the disclosed compounds, then the prior art is not sufficient to render structurally similar claims *prima facie* obvious because there is no motivation for one of ordinary skill in the art to make the referenced compounds, much less any structurally related compounds. In re Stemniski, 170 U.S.P.Q. 343, 348 (CCPA 1971).

D. It is improper to focus on methods for potentially isolating the claimed nucleic acids.

On page 7 of the office action, the Examiner stated:

> The instant rejection provides a very specific method of isolating a cDNA encoding a human PPAR by screening a human cDNA library with a cDNA encoding a murine PPAR as described on page 5599 of the Sher et al. publication.

However, the PTO's focus on known methods for potentially isolating the claimed DNA molecules is misplaced because the claims at issue define compounds, not methods. In re Bell, 26 USPQ2d 1529, 1532 (Fed. Cir. 1993). It is improper to reject claims to molecules based on the alleged obviousness of a method of making the molecules. In re Deuel, 34 USPQ2d 1210, 1214 (Fed. Cir. 1995).

Even though Applicant used a cDNA library from Clonetech, this invention does not claim a human cDNA library. At the time when this invention was made, it was not known that any human PPARγ gene existed in the human cDNA library, let alone the fact that there are more than one version of human PPARγ gene. The extent of sequence similarity between the claimed nucleic acids of this invention and the mouse PPARγ gene of Chen

et al. was not known until Applicant has cloned and sequenced the human PPARγ gene. The Examiner's theory that one might have been motivated to try to do what the applicant in fact accomplished amounts to speculation and an impermissible hindsight reconstruction of the claimed invention. It ignores the fact that the pending claims are limited to specific nucleic acid compounds, and do not cover a method for trying to obtain a gene the existence of which is unknown and may constitute many forms.

For the above stated reasons, it is respectfully submitted that Chen et al. and Sher et al. do not provide a *prima facie* case of obviousness, either alone or in combination.

Accordingly, the claims are now in condition for allowance and a notice to that effect is respectfully requested.

If there is any fee due in connection with this response, please charge Deposit Account No. 12-2475 for the appropriate amount.

Respectfully submitted,

LYON & LYON LLP

By: _____
Anthony C. Chen
Registration No. 38,673

LYON & LYON LLP
First Interstate World Center
633 West Fifth Street, Suite 4700
Los Angeles, CA 90071-2066
(619) 552-8400
(213) 955-0440